Remarks

Reconsideration of the pending Claims is respectfully requested.

Claims 1, 17-18, 28, 55, 60, 62, 139-143, 146 and 152 have been amended. The amendments to the claims are intended to merely clarify the subject matter claimed. No new matter has been added with the amendments of the claims.

Claims 11-14, 16, 27, 38-41, 48 and 67-69 have been canceled.

Claims 11-14, 38-41, 48 and 67-69 have been canceled without prejudice to their future prosecution as being drawn to non-elected subject matter. Applicant reserves the right to file one or more divisional applications on the non-elected claims.

Objections to the Claims

The Examiner objected to Claims 16 and 27. These claims have been canceled.

The Examiner objected to Claims 152-156, which have been corrected to recite "withdrawn" as the claim identifier.

Accordingly, withdrawal these objections to the claims is respectfully requested.

Rejection of Claims under 35 U.S.C. § 103(a) (Pregozen)

The Examiner maintained the rejection of Claims 1-6, 9, 10, 18-20, 22-24, 27, 28, 30-37, 42-45, 50, 55-60, 62-66, 70, 71, 77, 139-144, 146 and 148-151 under Section 103(a) as obvious over Pregozen (USP 5,141,803). This rejection is respectfully traversed.

In response to Applicant's arguments, the Examiner stated as follows (Office Action at page 6; emphasis added):

> 8....it is noted that since the components of Pregozen's composition are substantially the same and in the same relative amounts as claimed, *and having the same pH as claimed*, the composition of Pregozen is fully capable of removing the particles as claimed. ... For the purposes of searching for and applying prior art under 35 U.S.C. 102 and 103, *absent a clear indication in the specification or claims of what the basic and novel characteristics actually are*, "consisting essentially of" will be construed as equivalent to "comprising." See, e.g., PPG, 156 F.3d at 1355, 48 USPQ2d at 1355

The MPEP *2111.03* (Transitional Phrases) further states (emphasis added):

> ...("PPG could have defined the scope of the phrase 'consisting essentially of' for purposes of its patent *by making clear in its specification what it regarded as constituting a material change in the basic and novel characteristics of the invention.*"). See also AK Steel Corp. v. Sollac, 344 F.3d 1234, 1240-41, 68 USPQ2d 1280, 1283-84 (Fed. Cir. 2003) (Applicant's

> statement in the specification that "silicon contents in the coating metal should not exceed about 0.5% by weight" along with a discussion of the deleterious effects of silicon provided basis to conclude that silicon in excess of 0.5% by weight would materially alter the basic and novel properties of the invention. Thus, "consisting essentially of" as recited in the preamble was interpreted to permit no more than 0.5% by weight of silicon in the aluminum coating.); In re Janakirama-Rao, 317 F.2d 951, 954, 137 USPQ 893, 895-96 (CCPA 1963). If an applicant contends that additional steps or materials in the prior art are excluded by the recitation of "consisting essentially of," applicant has the burden of showing that the introduction of additional steps or components would materially change the characteristics of applicant's invention. In re De Lajarte, 337 F.2d 870, 143 USPQ 256 (CCPA 1964). ...

Pregozen does *not* teach the same pH as claimed. This was previously argued to the Examiner in Applicant's Response of July 10, 2006 – which the Examiner has failed to fully consider.

Pregozen *explicitly* teaches the *necessity* of a *pH of 3.5 to 4.5* – in order to achieve the antimicrobial effect contributed by the potassium sorbate. See Pregozen at col. 3, lines 32-38 and col. 4, lines 13-18 (emphasis added):

> The potassium sorbate is employed in the aqueous composition at a concentration of from about 0.02 to about 0.25 percent by weight of the aqueous composition. *The antimicrobial effect contributed by the sorbate is due primarily to sorbic acid to which the sorbate is converted in situ at the pH level employed in the aqueous composition as discussed hereinbelow.*
>
> ...
>
> The pH of the aqueous composition should be in the range of from *about 3.5 to about 4.5* and preferably from about 4.0 to about 4.3. *As disclosed hereinbefore, the antimicrobial activity derived from the use of potassium sorbate is due primarily to undissociated sorbic acid which is formed in situ in the pH range of 3.5 to 4.5. ....*

By comparison, Applicant's composition as claimed has *a pH of about 5-6.5* – which is much *higher* than that of Pregozen's composition.

Applicant particularly teaches a higher pH to achieve a composition that is both *cleaning* and *passivating* – to protect exposed metal surfaces. This is stated by Applicant in the published application US 2003/0089891 at paragraph [0032], as follows (emphasis added):

> [0032] The composition preferably has a pH of about 4.5 to about 6.5, preferably a pH of about 5 to about 6. *If the pH of the cleaning composition becomes too high or too low, the cleaning ability of the composition can be impaired and the passivating ability, or ability of the solution to maintain an environment that protects the exposed copper (or aluminum) structures, can be hindered.* The pH of the cleaning composition can be adjusted to the preferred range by adjusting the relative composition with respect to primary acidic or basic constituents. These may include citric acid, ammonium hydroxide or a tetraalkylammonium hydroxide such as tetramethylammonium hydroxide.

See also at paragraph [0014] (emphasis added):

> [0014] In one embodiment, the cleaning composition comprises a mixture of a cleaning agent and an antimicrobial agent in amounts relative to one another such that microbial growth within the cleaning composition is inhibited, and when the composition is in contact with both a metal conductive structure and a dielectric layer, *residual particles are removed therefrom with no significant defects to the conductive structure or the dielectric layer*, and microbial deposition on the cleaned surface is inhibited.

Applicant's composition is formulated not only with anti-microbial agents – but also with a *cleaning agent and a pH* at which residual copper or aluminum or other particles can be removed – *and* with no significant defects to a conductive structure or dielectric layer.

The Examiner stated that the composition of Pregozen is "fully capable of removing the particles as claimed" (Office Action at page 6, par. 8).

The Examiner apparently asserts that it would be *inherent* that Pregozen's composition would effectively remove particles from a substrate.

In relying upon the theory of inherency, the Examiner must provide factual and technical grounds to support the determination that the allegedly inherent characteristic *necessarily and inevitably* results from the applied prior art. Inherency may not be established by probabilities or possibilities. That a certain result or characteristic may occur or be present in the prior art is not sufficient to establish the inherency of that result or characteristic. *In re Robertson*, 49 USPQ2d 1949, 1950-51 (Fed. Cir. 1999). See also, *SmithKline Beecham Corp. v. Apotex Corp.*, 74 USPQ2d 1396 (Fed. Cir. 2005); *Continental Can Company USA v. Monsanto Company*, 20 USPQ2d 1746 (Fed. Cir. 1991); *In re Oelrich*, 212 USPQ 323, 326 (CCPA 1981).

For the doctrine of inherency to apply, it must be *inevitable* that Pregozen's composition *necessarily* removes particles from a substrate.

The Examiner has provided no such evidence or reasoning – and the disclosure of Pregozen does *not* support the Examiner's allegation.

There is no information in Pregozen about the removal of particles from a substrate.

Pregozen not only teaches a *lower pH at 3.5 to 4.5*, but also the inclusion of additional elements – polyhexamethylene biguanide hydrochloride and poly[oxyethylene(dimethyliminio) ethylene(dimethyliminio)ethylene dichloride – which are *polymers*, and much different than either benzoic acid or sorbic acid, not only in activity but in structure.

For at least the foregoing reasons, Pregozen does not teach or suggest Applicant's compositions as claimed. Accordingly, withdrawal of this rejection is respectfully requested.

Rejection of Claims under 35 U.S.C. § 103(a) (Pregozen, Small)

The Examiner maintained the rejection of Claims 16, 17, 51-54 and 147 under Section 103(a) as obvious over Pregozen in view of Small (USP 6,156,661). This rejection is respectfully traversed.

The Examiner maintains that it would be obvious to utilize an ammonium hydroxide (TMAH, NH_4OH) buffering agent in the composition taught by Pregozen.

As stated above, Pregozen particularly teaches the necessity of a *pH at 3.5 to 4.5* in order to realize the antimicrobial effect contributed by the potassium sorbate.

See Pregozen at col. 3, lines 32-38 and col. 4, lines 13-18. See also col. 5, lines 22-35, where Pregozen teaches adding citric acid *to adjust the pH to 3.5-4.5* (emphasis added):

> The aqueous composition of the invention can be prepared conveniently by the following procedure:
>
> All optional ingredients, except the plant extracts, to be included in the composition are combined and mixed until a clear mixture is obtained. The resulting mix is added with efficient stirring to approximately 95% of the formula amount of water and to this is added with stirring, individually and in the order listed, the plant extract, if any, the disodium ethylenediaminetetraacetate, the cationic biocide and the potassium sorbate. *Citric acid is then added to the stirred batch in an amount sufficient **to adjust the pH to 3.5 to 4.5**.* The remainder of the formula amount of water is then added with stirring.

Clearly – one reading Pregozen would not utilize an ammonium hydroxide buffering agent in Pregozen's composition. This would *contradict* Pregozen's teaching of a pH of 3.5-4.5.

Pregozen, either alone or combined with Small, does not teach or suggest Applicant's compositions as claimed. Accordingly, withdrawal of this rejection is respectfully requested.

Information Disclosure Statement.

Applicant filed an Information Disclosure Statement electronically in the U.S. Patent and Trademark Office on *June 6, 2006*. The Examiner is requested to consider the listed references, and return the Form 1449 with the references initialed as having been examined.

Extension of Term.

The proceedings herein are for a patent application and the provisions of 37 CFR § 1.136 apply. Applicant believes that no extension of term is required. However, this conditional petition is being made to provide for the possibility that Applicant has inadvertently overlooked the need for a petition for extension of time. If any extension is required and/or any fee is due, please consider this a petition therefor and charge the required fee to Account No. 23-2053.

It is respectfully submitted that the claims are in condition for allowance and notification to that effect is earnestly solicited.

Respectfully submitted,

Kristine M. Strodthoff

Dated: June 4, 2007

Kristine M. Strodthoff
Reg. No. 34,259

WHYTE HIRSCHBOECK DUDEK S.C.
555 East Wells Street
Suite 1900
Milwaukee, Wisconsin 53202-3819
(414) 273-2100
Customer No. 31870